

Emmells Septic Landfill Site

New Jersey

EPA ID#: NJD980772727

EPA REGION 2

Congressional District(s): 02

Atlantic

Galloway Township

NPL LISTING HISTORY

Proposed Date: 4/23/1999

Final Date: 7/22/1999

Site Description

The Emmell's Septic Landfill site encompasses approximately 38 acres in Galloway Township, New Jersey. The site was a landfill which operated from 1967 through 1979, accepting septic and sewage sludge which was ponded in trenches and lagoons. Reportedly, both solid and chemical waste was also disposed of at the landfill, including drums containing paint sludges, gas cylinders, household garbage, and construction debris. Groundwater is the primary source of drinking water within four miles of the site. In addition, groundwater is used for irrigation of commercial food crops within four miles of the site. It is estimated that 100 residents live within one-half mile of the site, with at least 25 residents situated within 2000 feet downgradient of the site. In addition, Stockton State College maintains two supply wells located within one mile downgradient of the site. The nearest resident is 200 feet from the site's property boundary.

Site Responsibility: This site is being addressed through Federal and State actions.

Threat and Contaminants

Buried drums containing paint sludges and compressed gas cylinders were present at the site. The paint sludges were found to contain elevated levels of volatile organic contaminants (VOCs) and lead. Soils on site were also found to contain significant levels of polychlorinated biphenyls, arsenic, lead and cadmium. Groundwater sampling conducted in the water table aquifer beneath the site indicates that VOCs, including vinyl chloride, 1,1-dichloroethene, cis-1,2-dichloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, toluene and benzene are present at levels in excess of federal drinking water standards. The potential exists for site-related groundwater contamination to migrate vertically and impact deeper residential wells. Entrances to the site are fenced.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Immediate Actions: From August 1999 through March 2000, EPA conducted a removal action to address material which may have been serving as a source of groundwater contamination. As part of this removal action, EPA excavated buried drums, cylinders, paint sludge wastes and the most heavily contaminated soil and disposed of the material at an appropriate disposal facility. In addition, residential wells which could potentially be impacted by the site were monitored during the removal action. Bottled water was supplied to six residences in the vicinity of the site during the removal action, due to the detection of elevated levels of lead in their potable wells which was potentially site-related. A lead isotope study subsequently conducted for EPA concluded that the lead detected in these residential wells was related to household plumbing rather than the site.

During the performance of groundwater investigations, EPA detected the presence of elevated levels of site-related VOCs in well water from one residence downgradient of the site. In order to alleviate risks posed by exposure to these VOCs, EPA installed a water treatment system for the potentially impacted residence in January 2001.

The results of groundwater investigations indicated that residential wells in the vicinity of the site were threatened by site-related groundwater contamination. Therefore, during the Summer of 2003, EPA installed a water main and connected 36 residences to the public water supply. In addition, in 2003, EPA detected the presence of elevated levels of site-related VOCs in well water from one residence located outside of the area served by the public water supply. In

order to alleviate risks posed by exposure to these VOCs, EPA installed a water treatment system for the potentially impacted residence in August 2003.

Entire Site: A Focused Feasibility Study (FFS) was initiated by EPA during 2000 in order to determine if treatment of contaminated groundwater in the vicinity of the site is warranted while the long term remedial investigation (RI) is being conducted. As part of the FFS, EPA preliminarily investigated the nature and extent of site-related groundwater contamination in the vicinity of the site. These results indicate that a site-related VOC plume, consisting primarily of trichloroethene, 1,2-dichloroethene, vinyl chloride, as well as petroleum-related VOCs and chlorinated benzene compounds, extends to the east of the landfill. In September 2003, EPA signed a Record of Decision (ROD) which selected an interim groundwater remedy for the site. This remedy calls for pumping and treating of contaminated groundwater to control migration of contamination off of the site property. This interim remedy is currently being designed.

EPA initiated the sitewide RI during the summer of 2002. As part of the RI, EPA has collected surface soil, subsurface soil and groundwater samples to try to fully characterize the nature and extent of contamination which may be related to the site. In addition, EPA conducted Membrane Interface Probe studies to determine whether subsurface sources of groundwater contamination remained at the site. Subsurface sources of groundwater contamination were not identified during this study. Subsequently, EPA conducted a Feasibility Study (FS) to evaluate appropriate cleanup technologies to address surface soil contaminated with polychlorinated biphenyls (PCBs) and VOC-contaminated groundwater. In September 2008, EPA issued a Record of Decision which selected a remedy for surface soil and groundwater contamination at the site. This remedy calls for the extraction and treatment of contaminated groundwater, with biosparging of contaminated groundwater not captured by the extraction system to enhance aerobic degradation of contaminants. In addition, the remedy provides for the excavation and off-site disposal of PCB-contaminated soil. EPA anticipates that the design of this remedy will be initiated in early 2009.

Site Facts: EPA sent Information Request Letters to parties who may be responsible for site contamination in May 1999.

Cleanup Progress

As part of the removal action, 438 drums, 11 gas cylinders and 28,046 cubic yards of soil were excavated and disposed of off site. In addition, over 3500 gallons of bottled water were supplied to residents whose potable wells were initially believed to have been potentially impacted by site-related contamination. Furthermore, 36 residences threatened by site-related groundwater contamination have been connected to the public water supply.

Site Repositories

Galloway Township Library, 306 East Jimmie Leeds Road, Galloway Township, NJ 08205